

**NAVAL ENERGY AND ENVIRONMENTAL
SUPPORT ACTIVITY**

Port Hueneme, California 93043-5014



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
MD P000003770

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Naval Training Center, Bainbridge		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER US Highway 222				
03 CITY Bainbridge	04 STATE MD	05 ZIP CODE 21904	06 COUNTY Cecil		07 COUNTY CODE MD	08 CONG DIST DIST
09 COORDINATES LATITUDE 39° 36' 40" N LONGITUDE 76° 05' 40" W						
10 DIRECTIONS TO SITE (Starting from nearest public road) US Interstate 95 North over Susquehanna River, then north on Maryland Route 222.						

III. RESPONSIBLE PARTIES

01 OWNER (if known) Chief of Naval Technical Training		02 STREET (Business, mailing, residential) Naval Air Station Memphis				
03 CITY Millington, TN	04 STATE TN	05 ZIP CODE 38054	06 TELEPHONE NUMBER (901) 873-5951			
07 OPERATOR (if known and different from owner) CNTT Detachment		08 STREET (Business, mailing, residential) Route 222				
09 CITY Port Deposit	10 STATE MD	11 ZIP CODE 21904	12 TELEPHONE NUMBER (301) 378-2792			
13 TYPE OF OWNERSHIP (Check one) <input type="checkbox"/> A. PRIVATE <input checked="" type="checkbox"/> B. FEDERAL: <u>US Navy</u> (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ (Specify) <input type="checkbox"/> G. UNKNOWN						

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: _____ MONTH DAY YEAR ☐ B. UNCONTROLLED WASTE SITE (RCRA 103(c)) DATE RECEIVED: _____ MONTH DAY YEAR ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE <u>5/23/90</u> MONTH DAY YEAR <input type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input checked="" type="checkbox"/> F. OTHER: <u>Naval Energy & Environmental Support Activity, Port Hueneme, CA</u> CONTRACTOR NAME(S): _____				
02 SITE STATUS (Check one) <input type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION See PA Report BEGINNING YEAR _____ ENDING YEAR _____ <input type="checkbox"/> UNKNOWN				

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Paints, solvents, hydrocarbon fuels, pesticides, polychlorinated biphenyls.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

No hazardous waste disposal areas were identified.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high, medium is checked, complete Part 2. Waste information and Part 2. Inspect. or private above buildings and incident(s))			
<input type="checkbox"/> A. HIGH (Inspection required promptly)	<input type="checkbox"/> B. MEDIUM (Inspection required)	<input type="checkbox"/> C. LOW (Inspection may be delayed)	<input type="checkbox"/> D. NONE (No further action needed, complete current assessment form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT George Clouton		02 OF (Agency/Department) Chesapeake Division Naval Facilities Engineering Command		03 TELEPHONE NUMBER (202) 433-27	
04 ADDRESS OF SITE FOR ASSESSMENT Genevieve Fanning		05 AGENCY Navy	06 ORGANIZATION NERSA Port Hueneme	07 TELEPHONE NUMBER (805) 982-4855	08 DATE 3/20/91

PRELIMINARY ASSESSMENT
REPORT

NAVAL TRAINING CENTER
BAINBRIDGE, MARYLAND

EPA IDENTIFICATION: MDP000003770

NEESA 13-191PA
SEPTEMBER 1991

PRELIMINARY ASSESSMENT
REPORT

Activity Name: Naval Training Center,
Bainbridge, Maryland

Address: Naval Training Center, Bainbridge
U.S. Highway 222
Bainbridge, MD

UIC: N00693

EPA Region: 3

EPA
Identification: MDP0000003770

Latitude: 39° 36' 40" N
Longitude: 76° 04' 40" W

Preliminary Assessment Team Members

Genevieve Fanning, Environmental Engineer
Steve Antonopoulos, Environmental Engineer
Naval Energy and Environmental Support Activity

Prepared by:
Naval Energy and Environmental Support Activity
Port Hueneme, CA 93043

NEESA 13-191PA
September 1991

In 1987, the U.S. Navy contracted Versar, Inc. to conduct Installation Restoration Program activities in two locations at Naval Training Center, Bainbridge. In May of 1990, a preliminary assessment was conducted to identify any additional sites of contamination. No additional potentially hazardous waste sites were identified during the preliminary assessment study. The two known sites, a former on-base sanitary landfill and an oil separator pit, were suspected of environmental contamination as the result of past Naval operations (Versar, 1988b), and Installation Restoration program activities are underway. Note that these two sites are not discussed in this preliminary assessment report.

1. INTRODUCTION

On March 1, 1990, Chesapeake Division, Naval Facilities Engineering Command (CHESDIV) requested that NEESA conduct a Preliminary Assessment of former Naval Training Center (NTC) Bainbridge, Maryland (ltr 5090 114 of 1 MAR 1990). The PA on-site survey was conducted 23 May 1990. Information in this report is current as of this date.

Though most of the facility was shut down when the base was deactivated in 1976, a portion housed the Department of Labor-sponsored youth job training program until August of 1990. A description of the activity and the former naval training center mission and history is given in section 3. General findings concerning hazardous material/waste disposal are presented in section 4. Conclusions and recommendations are included in section 5.

2.0 AUTHORITY AND SCOPE.

Section 211 of the Superfund Amendments and Reauthorization Act of 1986 (SARA 211) provides continued authority for the Department of Defense Environmental Restoration Program (DERP) and the Defense Environmental Restoration Account (DERA). The Navy Installation Restoration (IR) program is authorized by Chief of Naval Operations instruction (OPNAVINST) 5090.1 of 26 May 1983. The Naval Facilities Engineering Command (NAVFACENGCOM) manages the Navy program. NAVFACENGCOM tasked the Naval Energy and Environmental Support Activity (NEESA) to conduct a Preliminary Assessment (PA) for each Navy and Marine Corps facility listed on the Federal Facilities Hazardous Waste Compliance Docket (Docket) as required by SARA 120. NEESA may also conduct preliminary assessments at the request of a NAVFACENGCOM Engineering Field Division.

PAs are conducted in accordance with the Preliminary Assessment Guidance for Fiscal Year 1988, OSWER DIRECTIVE 9345.0-01, U.S. Environmental Protection Agency, January 1988, and recommendations are consistent with the National Contingency Plan.

The PA begins with investigation and review of available records at NEESA and the cognizant NAVFACENGCOM Engineering Field Division. After the record search, the PA team visits the activity to complete documentation of past and present operations and disposal practices. With the assistance of the activity point of contact, the team tours the activity and interviews long term employees. If a potential threat to human health or the environment is suspected, further action is recommended.

3.0 ACTIVITY DESCRIPTION

3.1 Location.

Former Naval Training Center (NTC) Bainbridge comprises 1132 acres located on U.S. Highway 222 near the Susquehanna River in northeast Maryland, as shown in Figure 1. The former center is bordered by the river to the southwest, the town of Port Deposit to the south and rural area to the east and north. The facility is shown in Figure 2.

3.2 Mission and History.

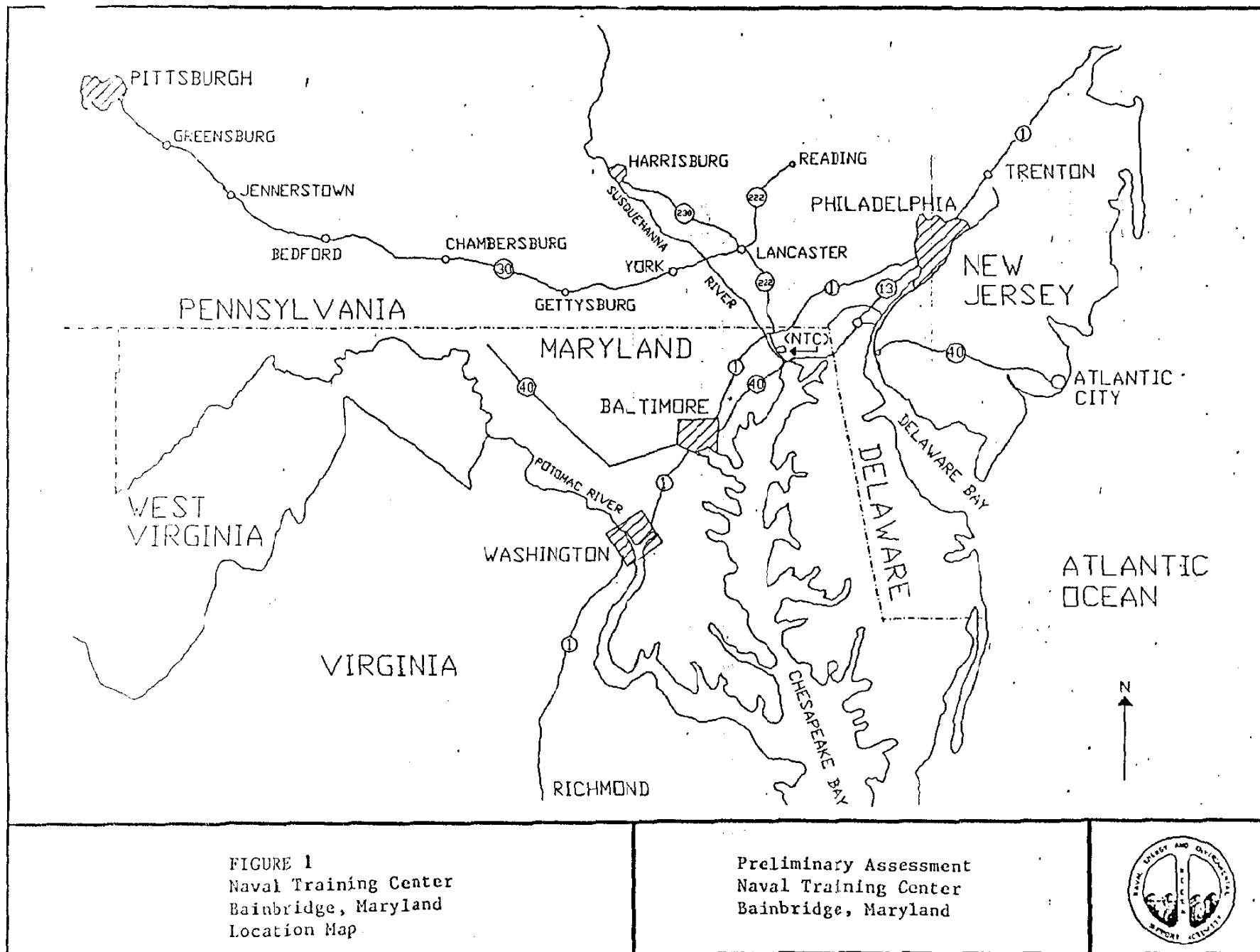
NTC Bainbridge was constructed in 1941 as a training facility for World War II Navymen. The facility was partially deactivated shortly after World War II and maintained minimal activity until finally closing in the early 70s. A portion of the facility currently houses a Department of Labor-sponsored youth job training program (Versar, 1988a).

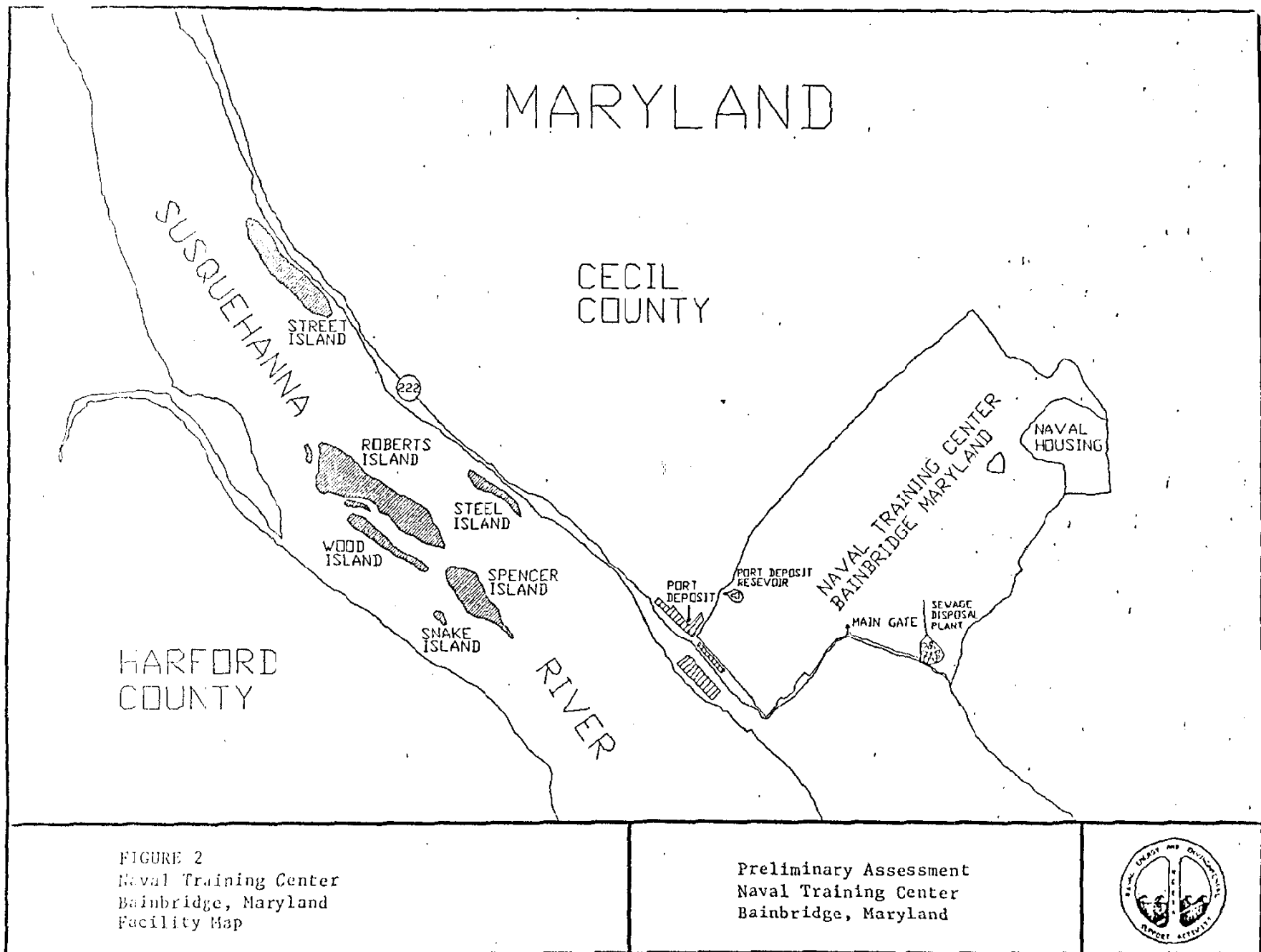
While the Recruit Training Command at Bainbridge handled the largest number of men, an Administrative Command, Service School Command, and a U.S. Naval Hospital were also located in the Center.

3.2.1 Recruit Training Command. In the early 1940s, recruiting was proceeding at a lively rate. The Operation Force Plan called for 1,023,000 men by June 30, 1943. The shortage of naval training-station capacity was considered too great to be met by further enlargements of the existing training stations. The recommendation was made by the Bureau of Navigation that four new stations be established, each capable of accommodating 20,000 men. Two were to be located along the West Coast, one in the East, and one in the central or southern part of the country.

A favorable site for one of the stations was found at Port Deposit, Maryland on the east bank of the Susquehanna River where the land is rolling and well drained. On March 25, 1942, the president approved the acquisition of the Port Deposit site and 330 acres of land with the buildings that previously comprised the Tome School for boys. The Maryland station received its name from Commodore William Bainbridge, commander of the FRIGATE "Constitution" during the war of 1812, immortalized in the poem "Old Ironsides". On June 16, 1942, Captain C. F. Russell, USN, reported as the Center's first commanding officer. By October 1, 1942, the Center was commissioned, and on the 10th of that month the first recruit came aboard.

The station consisted of a number of 5,000-man camps, or units, in which a recruit would make his home and receive the scheduled instruction during the entire period of his basic training. Each of the recruits received an intensive course in physical fitness and survival techniques, ordnance and gunnery, use of small arms, seamanship, damage control, military drill, and "ship's works". Developing the training station unit by unit allowed occupancy of the station to take place progressively.





Frame construction was used throughout the facility. All roofs were flat with the exception of those for the four large drill halls and the auditorium, which were supported by laminated wood arches. Barracks, school ship's service, and administration buildings were of the two-story design; all others were one story. Cement-asbestos board was used throughout the station to cover exterior walls. Interior walls were covered with plaster board and fiber board. Most of the buildings were equipped with individual stoker-fired boilers to provide low-pressure steam for heating. Buildings in the hospital area, the large mess halls, the bakery, and the laundry were heated from central boiler plants.

Each training-unit was developed around a parade ground and drill field embracing about 14 acres. The drill hall provided nearly two acres of unobstructed floor area, serving as an indoor drill field in severe weather. It also provided gymnasium facilities, a large swimming pool, a removable stage, and motion picture equipment. The mess hall was large enough to feed 5,000 men at each meal. Living quarters for the men were provided by two-story barracks, each housing 228 men. Each building was equipped with its own heating plant and sanitary facilities. Each training unit was provided with two dispensaries. A ship's service building provided a cafeteria, a store, and recreation facilities in the form of bowling alleys, game rooms, and a library.

A prominent feature of the station was an outdoor theater seating 10,000, built in conjunction with the auditorium building of the central recreation group. The stage of the theater was built as an integral part of the stage of the auditorium. The seats were arranged in amphitheater style, on ground which had been terraced and graded. A large door in the center of the back of the stage provided access to the stage of the auditorium. The auditorium building had a seating capacity of 2732.

The training center was de-commissioned as a Recruit Training Center on 30 June, 1947, but the Naval Preparatory School stayed on at Bainbridge until 1949, when it was moved to Newport, RI, in October of that year. More than 260,000 recruits received their training here during the period 1942-1947 (History of Bainbridge, 1951). The U.S. Naval Preparatory School was moved back to the Center on 10 May 1951.

3.2.2 Service Schools and Administrative Commands. The Service School Command was a special duties school for selected graduates of the recruit-training course.

The administrative buildings were constructed to serve the entire establishment. In addition to undertaking logistic, fiscal, and security functions, the Administrative Command administered a Dental Technicians School.

3.2.3 U.S. Naval Hospital. To provide proper medical service for the Center, it was necessary during World War II to build a Naval Hospital. The Naval Hospital moved into their new quarters in February 1943. More the 80,000 patients were cared for in the hospital during World War II.

3.2.4 NTC Bainbridge Rehabilitation, 1951. After the Korean crisis, when it again became evident that a large Navy was one of the vital backbones of our defense structure, the decision was made to re-activate the training center. Accordingly, on January 1951, Captain Robert Hall Smith, USN, reported to the Center and assumed command at commissioning exercises on 1 February 1951. Captain Smith and his small group of officers and men found the Center largely in a state of disrepair. The temporary buildings, long unused and unheated, were in need of extensive re-working. A contract was let with the Consolidated Engineering Corporation of Baltimore, Maryland, for the rehabilitation. On April 2, 1951, the first recruits, thirteen of them, reported aboard the Center for training.

The Hospital was re-activated in April, 1951, and designated as a 500 bed hospital by the Bureau of Medicine and Surgery, with the ability to expand to 1500 patients. The U.S. Naval Hospital not only provided medical and surgical facilities for all recruits, students, and staff of the Center but operated a Hospital Corps School that trained 1200 hospital corpsmen per year.

The training Center was officially closed for a second time December 31, 1957 (Navy Times, 1957).

3.2.5 Expansion of NTC Bainbridge, 1962. Bainbridge looked forward to continued expansion in July 1962 with the transfer of the U.S. Naval Nuclear Power School, the relocation of the Naval Reserve Manpower Center and a consolidation of the ten naval district personnel accounting machine installations to Bainbridge. In addition, Bainbridge hosted Camp Concern, to which thousands of disadvantaged children from nearby cities came for fresh air and a full range of healthful athletic activities (Coletta, 1985).

3.2.6 Base Closure for NTC Bainbridge. The beginning of the end for Bainbridge became apparent in 1972, when ECPO was deactivated and the Reserve Training Center for Women, the Yeoman School, and Radioman B School were transferred to the Navy's new recruit center at Orlando, Florida. Command was shifted from the Chief of Naval Operations to the Chief of Naval Technical Training. The Department of Defense publicly announced that all the facilities at Bainbridge would be closed by January 1, 1975. The students of the Nuclear Power School graduated March 5, 1975, before the school was transferred to Orlando. Bainbridge hosted its final Camp Concern and aided nearby local communities hit by Hurricane Eloise on September 26; and after thirty-three years, it was farewell to Bainbridge (Coletta, 1985).

3.3 Surrounding Area.

Information regarding the environmental setting of NTC Bainbridge, such as topography and drainage, climate and vegetation, geology, hydrogeology, as well as demographic information can be found in the report which characterizes the former Base Landfill and the Oil Separator Pit: Hydrogeological Investigation of Waste Disposal Sites at the former Naval Training Center Bainbridge, Port Deposit, Cecil County, Maryland, 1989, prepared for Atlantic Division Naval Facilities Engineering Command, by Versar, Inc. under contract No. N62470-87-8-8901.

Information on the presence of endangered species within a 15 mile radius of NTC Bainbridge is given in appendix A. There are no known Federal or State threatened or endangered plant or wildlife species present within the boundaries of the Bainbridge Naval Training Center (MDNR, 1990)

4.0 FINDINGS

4.1 Hazardous Material/Hazardous Waste Disposal.

In 1988 NTC Bainbridge was assigned generator EPA ID number MDP0000033770 for the one time disposal of accumulated hazardous waste which consisted of flush oil, lube oil, fuel additive, tar patching waste, batteries, corrosion prevention compounds, paints and dry cleaning fluid. A copy of the hazardous waste manifest listing the quantities of each is included in appendix B. This waste was excessed through DRMO, Aberdeen Proving Ground, to Chemical Waste Management, Inc. of Emelle, Alabama, EPA ID number ALD000622464.

Polychlorinated Biphenyls (PCBs). In February 1982, an on-site survey was conducted to determine the presence of PCBs in electrical transformers and other equipment. The survey included a records search, sampling and laboratory analysis of all oil filled electrical equipment, and sampling of transformer oil spill areas. In September 1982, all transformers identified as containing PCBs were inspected and properly labeled. Minor leaks were repaired, and any leakage was cleaned up and disposed in accordance with existing regulations. The laboratory analysis and follow-up inspection determined that all transformers at NTC Bainbridge were in compliance with the requirements of 40 CFR 761 (Bainbridge, 1983).

By 1985, all PCB containing transformers and capacitors were decommissioned and temporarily stored in Building 720 until final disposal. Copies of the disposal manifests are located at Chesapeake Division, Naval Facilities Engineering Command (CHESDIV). The final disposal site for the transformers was PCB Inc. of Kansas City, Missouri, and American Industrial Waste of White Bluff, Tennessee.

4.2 Underground Storage Tanks.

With the exception of seventeen underground storage tanks (USTs) used to support the Department of Labor youth training program, all USTs were removed from the Bainbridge facility by Versar, Inc. of Springfield, Virginia as part of the NTC Bainbridge underground storage tank remediation project. Any product or sludge remaining in the tanks prior to removal was properly manifested and disposed (Versar, 1991). Ground-water monitoring wells were installed at locations where leaking underground storage tanks were removed.

In agreement with the State of Maryland, the remaining seventeen tanks will be dealt with at a future date. The tanks are currently empty (CHESDIV, 1991).

4.3 Storm and Sanitary Sewer/Potable Water Supply.

Water is supplied to the two job corps training centers by the town of Port Deposit. The raw water pumping station, located within the municipal limits upstream of Port Deposit, draws directly from the Susquehanna River. The water is processed and stored in the Port Deposit Reservoir for distribution to residents of the town and vicinity (Versar, 1988). A domestic well survey conducted in September 1988 revealed no domestic well use in the town of Port Deposit (LANTDIV, 1988).

Effluent from the sewage treatment plant was discharged to the Susquehanna River according to National Pollutant Discharge Elimination System (NPDES) permit number MD0020869. The permit was revised in 1977 in accordance with a decrease in the base population. In August 1990 the Department of Labor youth training program ended; the NTC Bainbridge sewage treatment plant was closed in December of 1990.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Installation Restoration program activities are underway at the former base landfill and fire fighting training area, and preliminary results indicate contamination exists at these two sites. The Remedial Investigation/Feasibility Study (RI/FS) will recommend remedial measures. The underground storage tank removal, soil clean-up, asbestos removal, and demolition of unsound structures issues have been addressed by Chesapeake Division, Naval Facilities Engineering Command. No additional potentially hazardous waste sites were identified from the records search and interviews with personnel during the PA; and no additional work is recommended as a result of the PA findings.

REFERENCES

Bainbridge, 1983. Ltr 444-9054 241:RHS:drd 4500/MD TRACEN
BAINBRIDGE 21 Mar 1983.

Bureau of Yards and Docks, 1947. Building the Navy's Bases in World War II, Volume I, U.S. Government Printing Office, Washington D.C.

CHESDIV, 1990. Ltr 5090 114 of 1 Mar 1990.

CHESDIV, 1991. Personal Communication between G. Fanning (NEESA)/ and S. Greene (CHESDIV) Sept 26, 1991, Re: underground storage tanks.

CHESDIV, 1991. Personal Communication between G. Fanning (NEESA)/ and G. Cloudon (CHESDIV) Sept 30, 1991, Re: underground storage tanks.

Coletta, Paola E., 1985. United States Navy and Marine Corps Bases, Domestic, Paolo E. Coletta, editor; Greenwood Press, Westport, Connecticut.

"History of Bainbridge", 15 August 1951. Naval Archives, Construction Battalion Center, Port Hueneme, CA, 2 p.

LANTDIV, 1988. Memo to the file from John Kresky, Code 1142, 13 Sep 88.

MDNR, 1990. Maryland Department of Natural Resources, Forest, Park and Wildlife Service, ltr of June 13, 1990.

Navy Times, 1957. "Last Bainbridge Boot Company Will Graduate on October 26", October 19, 1957.

U.S. Naval Institute, 1957. United States Naval Institute Proceedings, January 1957, Editorial and Business Offices: Annapolis, Maryland.

Versar, 1988a. Hazardous Ranking System, Versar, Inc., October 26, 1988.

Versar, 1988b. Draft Hydrogeological Investigation of Waste Disposal Sites at the former Naval Training Center Bainbridge, Port Deposit, Cecil county, Maryland, December 7, 1988.

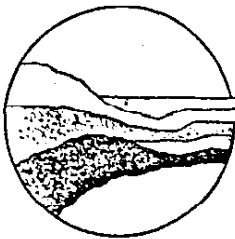
Versar, 1989. Hydrogeological Investigation of Waste Disposal Sites at the former Naval Training Center Bainbridge, Port Deposit, Cecil county, Maryland,

Versar, 1991. Bainbridge NTC Underground Storage Tank Remediation Project, Versar, Inc., Springfield, Virginia, January 22, 1991.

APPENDIX A

Endangered Species
Fifteen Mile Radius
Naval Training Center Bainbridge

Maryland Department of Natural Resources
Forest, Park and Wildlife Service
June 13, 1990



Maryland Department of Natural Resources

Forest, Park and Wildlife Service

Tawes State Office Building
Annapolis, Maryland 21401

William Donald Schaefer
Governor

Torrey C. Brown, M.D.
Secretary

June 13, 1990

Donald E. MacLauchlan
Assistant Secretary

Ms. Jacqueline R. Francis
DEPARTMENT OF THE NAVY
Naval Energy and Environmental Support Activity
Port Hueneme, California 93043-5014

RE: 15 mile radius of Naval Training Center - Bainbridge
Maryland

Dear Ms. Francis:

This project requested information of the presence of endangered species within the boundaries of the Naval Training Center, in Bainbridge, Maryland. However, there are no known Federal or State Threatened or endangered plant or wildlife species present within the boundaries of the Bainbridge Naval Training Center.

This project also requested information on the presence of endangered species within a 15 mile radius of the Bainbridge Naval Training Center. Because of the nature of the Maryland Natural Heritage Division's Rare, Threatened and Endangered Species Database it is not possible, without reimbursement for time and expertise, to provide exactly what was requested. Our Database is arranged on the basis of standard USGS 7.5 minute Quadrangle maps. Therefore, we can only provide information on those endangered species located on the quads which fall within a 15 mile radius.

Attached is a list of all those Rare, Threatened and Endangered species in Maryland located within an approximate 15 mile radius of the Bainbridge Naval Training Center.

When more detailed project information becomes available please recontact us to determine what (if any) populations of rare species would be directly affected. For additional information and assistance please contact Aaron Keel, at (301) 974-2870.

Additionally, portions of the 15 mile radius project area are located within the Chesapeake Bay Critical Area and, therefore, certain other protected wildlife habitats must be addressed by any proposed project plans.

Within the 15 mile radius project area there are approximately 10 Bald Eagle nesting sites and five Colonial Waterbird nesting sites. These nesting sites are generally protected by zones equal to 1/4 mile in radius.

June 14, 1990

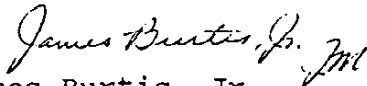
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Within the 15 mile radius project area, are many forested areas equal to or greater than 100 acres in size. These forested areas may contain breeding populations of Forest Interior Dwelling Bird species. Forest Interior Dwelling Bird habitat must be conserved in the Chesapeake Bay Critical Area.

Within the 15 mile radius project area, most open water areas will support wintering waterfowl populations. Certain open water areas have been classified as Historic Waterfowl Staging and Concentration Areas, based on their importance to wintering waterfowl populations. These staging and concentration area are protected from disturbances resulting from the siting of certain new water-dependent facilities within the Chesapeake Bay Critical Area.

For technical assistance in developing acceptable conservation measures for the above noted species and/or habitats, please contact Peter Bendel, Bay Wildlife Biologist at (301) 827-8612.

Sincerely,



James Burtis, Jr.
Director, Planning and Program Development

JB:dec

cc: Lynn Davidson
John Moulis
Robert Northrop
Jeff Horan
ER# 90.05.392

RARE, THREATENED, AND ENDANGERED SPECIES
NEAR NAVAL TRAINING CENTER, BAINBRIDGE, MARYLAND
June 4, 1990

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HP</u> **	<u>MD</u>	<u>US</u>
PLANTS				
AGALINIS SETACEA	THREAD-LEAVED GERARDIA	S1	E	
AGRIMONIA MICROCARPA	SMALL-FRUITED AGRIMONY	SH		
AGRIMONIA STRIATA	WOODLAND AGRIMONY	S1		
ALNUS MARITIMA	SEASIDE ALDER	S3		3C
ALOPECURUS AEQUALIS	SHORT-AWNED FOXTAIL	SH		
AMELANCHIER OBOVALIS	COASTAL JUNE BERRY	SH		
AMELANCHIER SPICATA	RUNNING JUNE BERRY	S1		
AMMANNIA LATIFOLIA	KOEHN'S AMMANNIA	S1		
ANEMONE CANADENSIS	CANADA ANEMONE	SH	X	
ANTENNARIA SOLITARIA	SINGLE-HEADED PUSSYTOES	S1	T	
APOCYNUM SIBIRICUM	CLASPING-LEAVED DOGBANE	SH		
ARABIS SHORTII	SHORT'S ROCK CRESS	SH		
ASPLENIUM PINNATIFIDUM	LOBED SPLEENWORT	S1		
ASTER DEPAUPERATUS	SERPENTINE ASTER	S1	E	C2
ATHYRIUM PYCNOCARPON	GLADE FERN	S1	T	
BIDENS BIDENTOIDES	MARYLAND BUR-MARIGOLD	S2	T	C2
BIDENS CORONATA	TICKSEED SUNFLOWER	S1	E	
BIDENS DISCOIDEA	SWAMP BEGGAR-TICKS	S1	E	
BIDENS MITIS		S1	E	
BOLTONIA ASTEROIDES	ASTER-LIKE BOLTONIA	S1	E	
BROMUS LATIGLUMIS	BROAD-GLUMED BROME	S1		
UCHNERA AMERICANA	BLUE-HEARTS	SH	X	
ACALIA SUAVEOLENS	SWEET-SCENTED INDIAN-PLANTAIN	S1		
CAMPANULA ROTUNDIFOLIA	HAREBELL	S2		
CARDAMINE LONGII	LONG'S BITTER CRESS	S1	E	C2
CAREX BUXBAUMII	BUXBAUM'S SEDGE	S1	E	
CAREX HIRTIFOLIA	PUBESCENT SEDGE	SH		
CAREX HITCHCOCKIANA	HITCHCOCK'S SEDGE	SH		
CAREX POLYMORPHA	VARIABLE SEDGE	SH	X	C2
CAREX STRIATULA	LINED SEDGE	SH	X	
CAREX TENERA	SLENDER SEDGE	SH	X	
CAREX TETANICA	RIGID SEDGE	SH	X	
CAREX TONSA	SHAVED SEDGE	SH		
CASTILLEJA COCCINEA	INDIAN PAINTBRUSH	S1		
CERATOPHYLLUM MURICATUM	PRICKLY HORNWORT	S1		
CHENOPODIUM STANDLEYANUM	STANDLEY'S GOOSEFOOT	S1		
CICUTA BULBIFERA	BULB-BEARING WATER-HEMLOCK	S1		
CLEMATIS OCCIDENTALIS	PURPLE CLEMATIS	SH	X	
COREOPSIS TRIPTERIS	TALL TICKSEED	S1		
CUSCUTA POLYGONORUM	SMARTWEED DODDER	SH		
CYPERUS DENTATUS	TOOTHED SEDGE	SH		
CYPERUS RETROFRACTUS	ROUGH CYPERUS	S1		
DESMODIUM PAUCIFLORUM	FEW-FLOWERED TICK-TREFOIL	SH	X	
DESMODIUM RIGIDUM	RIGID TICK-TREFOIL	S1	E	
DESMODIUM SESSILIFOLIUM	SESSILE-LEAVED TICK-TREFOIL	SH		
FLEOCHARIS HALOPHILA		SH	X	
FLOBIUM CILIATUM	NORTHERN WILLOWHERB	SH		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HP</u>	<u>MD</u>	<u>US</u>
EPILOBIUM STRICTUM	DOWNY WILLOWHERB	SH	X	
QUISETUM FLUVIATILE	WATER HORSETAIL	S1	E	
ERIOCAULON PARKERI	PARKER'S PIPEWORT	S1	E	C2
ERIOCAULON SEPTANGULARE	SEVEN-ANGLED PIPEWORT	SH	X	
ERYTHRONIUM ALBIDUM	WHITE TROUT LILY	S2		
EUPHORBIA PURPUREA	DARLINGTON'S SPURGE	S1	E	C2
FESTUCA PARADOXA		SH	X	
GENTIANA ANDREWSII	FRINGE-TIP CLOSED GENTIAN	S2		
GENTIANA VILLOSA	STRIPED GENTIAN	S1		
GENTIANOPSIS CRINITA	FRINGED GENTIAN	S1		
HELIANTHEMUM BICKNELLII	HOARY FROSTWEED	SH		
HELONIAS BULLATA	SWAMP-PINK	S1	E	LT
HYDRASTIS CANADENSIS	GOLDENSEAL	S1	T	3C
HYPERICUM PYRAMIDATUM	GREAT ST. JOHN'S-WORT	SH	X	
IRIS PRISMATICA	SLENDER BLUE FLAG	S1		
JUNCUS BALTICUS	BALTIC RUSH	SH		
JUNCUS BRACHYCARPUS	SHORT-FRUITED RUSH	SH		
JUNCUS LONGII		SH		
JUNIPERUS COMMUNIS	COMMON JUNIPER	SH	X	
LATHYRUS PALUSTRIS	VETCHLING	SH		
LIMNOBIUM SPONGIA	AMERICAN FROG'S-BIT	SH	X	
LIMOSELLA SUBULATA	MUDWORT	S2	E	
LINUM FLORIDANUM	FLORIDA YELLOW FLAX	SH	X	
LINUM INTERCURSUM	SANDPLAIN FLAX	S1	E	
LINUM SULCATUM	GROOVED FLAX	SH		
LUDWIGIA DECURRENS		SH		
YGODIUM PALMATUM	CLIMBING FERN	S2	T	
ATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN	S2		
NAJAS GRACILLIMA	THREAD-LIKE NAIAD	SH	X	
NELUMBO LUTEA	AMERICAN LOTUS	S2	T	
PANICUM OLIGOSANTHES	FEW-FLOWERED PANICGRASS	SH		
PEDICULARIS LANCEOLATA	SWAMP LOUSEWORT	S1		
PILEA FONTANA	COOLWORT	SH		
PLATANThERA PERAMOENA	PURPLE FRINGELESS ORCHIS	S1	T	3C
PLATANThERA PSYCODES	SMALL PURPLE-FRINGED ORCHIS	SH		
POA ALSODES	GROVE MEADOW-GRASS	S2		
POLANISIA DODECANDRA	CLAMMYWEED	SH	X	
POLEMONIUM VAN-BRUNTIAE	JACOB'S-LADDER	S1	E	C2
POLYGALA SENEGA	SENECA SNAKEROOT	S2		
POLYGONUM ROBUSTIUS	STOUT SMARTWEED	SH		
POTAMOGETON AMPLIFOLIUS	LARGE-LEAVED PONDWEED	SH		
POTAMOGETON FOLIOSUS	LEAFY PONDWEED	S1		
POTAMOGETON PERFOLIATUS	CLASPING-LEAVED PONDWEED	S2		
POTAMOGETON PUSILLUS	SLENDER PONDWEED	SH		
POTAMOGETON RICHARDSONII	REDHEADGRASS	SH	X	
POTAMOGETON SPIRILLUS	SPIRAL PONDWEED	S1		
PRUNUS ALLEGHANIENSIS	ALLEGHANY PLUM	S1	E	3C
PYCNANTHEMUM VERTICILLATUM	WHORLED MOUNTAIN-MINT	S1		
PYCNANTHEMUM VIRGINIANUM	VIRGINIA MOUNTAIN-MINT	S2		
RANUNCULUS CAROLINIANUS	CAROLINA BUTTERCUP	SH		
RHYNCHOSPORA GLOBULARIS	GRASS-LIKE BEAKRUSH	S1	E	
RUPELLIA STREPENS	RUSTLING WILD-PETUNIA	S1		
HEX ALTISSIMUS	TALL DOCK	S1		
SITTARIA CALYCINA	SPONGY LOPHOTOCARPUS	S1	T	

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>HP</u>	<u>MD</u>	<u>US</u>
AGITTARIA LONGIROSTRA	LONG-BEAKED ARROWHEAD	SH		
ALIX DISCOLOR	PUSSY WILLOW	SH		
SALIX EXIGUA	SANDBAR WILLOW	S1	E	
SALIX LUCIDA	SHINING WILLOW	SH	X	
SALIX TRISTIS	DWARF PRAIRIE WILLOW	S2		
SANGUISORBA CANADENSIS	CANADA BURNET	S2		
SCIRPUS CYLINDRICUS	SALT-MARSH BULRUSH	SH		
SCLERIA RETICULARIS	RETICULATED NUTRUSH	S2		
SCUTELLARIA LEONARDII	LEONARD'S SKULLCAP	S2		
SCUTELLARIA NERVOSA	VEINED SKULLCAP	SH	X	
SIDA HERMAPHRODITA	VIRGINIA MALLOW	S1	T	3C
SILENE NIVEA	SNOWY CAMPION	S1		
SMILACINA STELLATA	STAR-FLOWERED FALSE SOLOMON'S-SEAL	S1		
SOLIDAGO RIGIDA	HARD-LEAVED GOLDENROD	SH		
SOLIDAGO SPECIOSA	SHOWY GOLDENROD	S1	E	
SPIRANTHES LUCIDA	WIDE-LEAVED LADIES'-TRESSES	S1		
SPOROBOLUS CLANDESTINUS	ROUGH RUSHGRASS	SH		
SPOROBOLUS HETEROLEPIS	NORTHERN DROPSEED	S1		
STACHYS ASPERA		SH	X	
STACHYS CLINGMANII	CLINGMAN'S HEDGE-NETTLE	SU		
STELLARIA ALSINE	TRAILING STITCHWORT	SH	X	
STENANTHIUM GRAMINEUM	FEATHERBELLS	S1	T	
TALINUM TERETIFOLIUM	FAMEFLOWER	S1S2		
THALICTRUM CORIACEUM	LEATHERLEAF MEADOWRUE	S1		
THALICTRUM STEELEANUM	STEELE'S MEADOWRUE	S1	T	C2
ASPIUM TRIFOLIATUM	PURPLE MEADOW-PARSNIP	S1		
DIADENUM TUBULOSUM		SH		
TRIPHORA TRIANTHOPHORA	NODDING POGONIA	SH		
VALERIANA PAUCIFLORA	VALERIAN	S1		
ANIMALS				
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	S1		LE
ACIPENSER OXYRHYNCHUS	ATLANTIC STURGEON	S2S3		
CRYPTOBRANCHUS ALLEGANIEN	HELLBENDER	S1	E	C2
ETHEOSTOMA SELLARE	MARYLAND DARTER	S1	E	LE
ETHEOSTOMA VITREUM	GLASSY DARTER	S1	X	
GRAPTEMYS GEOGRAPHICA	MAP TURTLE	S1	I	
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	S1	E	LE
PERCINA CAPRODES	LOGPERCH	SU		
PERCOPSIS OMISCOMAYCUS	TROUT-PERCH	SH	X	
SCIURUS NIGER CINEREUS	DELMARVA FOX SQUIRREL	S1	E	LE
SPEYERIA IDALIA	REGAL FRITILLARY	S1	E	C2

* THIS IS A LIST OF SPECIES CURRENTLY OR HISTORICALLY FOUND ON THE U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS TOUCHED BY A CIRCLE WITH A 15 MILE RADIUS CENTERED AT THE NAVAL TRAINING CENTER, BAINBRIDGE, MARYLAND.

** SEE ATTACHMENT FOR EXPLANATION OF STATUS CODES (HP, MD, US).

MARYLAND DEPARTMENT OF NATURAL RESOURCES' FOREST, PARK & WILDLIFE SERVICE
MARYLAND NATURAL HERITAGE DIVISION

MD - State Status (cont.)

T = species currently listed as Threatened in Maryland.

I = species currently listed as In Need of Conservation in Maryland.

US - Federal Status

LE = species currently listed as Endangered.

LT = species currently listed as Threatened.

C1 = candidate taxa presently under review for federal listing for which substantial information exists on biological vulnerability and threat(s) to indicate the appropriateness of listing the taxa as Endangered or Threatened.

C1* = C1 taxa which are considered possibly extinct.

C2 = candidate taxa presently under review for federal listing for which information indicates that listing as Endangered or Threatened is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support proposed rules.

3A = taxa previously under review for federal listing for which information indicates probable extinction.

3B = taxa previously under review for federal listing which are no longer considered distinct species.

3C = taxa that have proved to be more abundant or widespread than was previously believed and/or those that are not subject to any identifiable threat.

DEPARTMENT OF NATURAL RESOURCES' FOREST, PARK & WILDLIFE SERVICE
MARYLAND NATURAL HERITAGE PROGRAM

June 5, 1990

- Bald Eagle nest sites
- Colonial waterbird nest site
- with the 15 mile radius study are any forested area greater than or equal to 100 acres may contain Forest interior breeding birds,
- most waterways will contain waterfowl

APPENDIX B

Hazardous Waste Manifest
December 1988

A. UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. MDP000003770	Manifest Document No. 09844	22. Page 2/2	Information in the shaded areas is not required by Federal law.																			
23. Generator's Name Brainbridge NTC 960 RMO - Aberdeen Bldg 3620, Aberdeen Proving Ground MD 21005				L. State Manifest Document Number CWMA 409844																				
24. Transporter's Company Name Chemical Waste Management Inc				M. State Generator's ID																				
25. US EPA ID Number ILD099202681				N. State Transporter's ID P61-200-IL																				
26. Transporter's Company Name				O. Transporter's Phone (203) 775 9000																				
27. US EPA ID Number				P. State Transporter's ID																				
				Q. Transporter's Phone																				
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		29. Containers No.	Type	30. Total Quantity	31. Unit M/Vol	R. Waste No.																		
a. Hazardous Waste Solid, nus ORM-E NA9189 CWM Profile Number U30228		xx2	DM	xx110	G	None																		
b. Waste battery wet, filled with Acid Corrosive material UN2794 CWM Profile Number V80373		xx1	DM	xx500	P	D002 0008																		
c. Waste Combustible Liquid, nus Combustible Liquid NA1893 CWM Profile Number J07836		xx1	DM	xx55	G	D001																		
d. RQ Waste Paint Flammable Liquid UN1263 CWM Profile Number J07849		xx4	DM	xx190	G	D001 F003																		
e. Waste Tetra chloro ethylene ORM-A UN1897 CWM Profile Number G07844		xx1	DM	xx35	G	F002																		
CWM Profile Number																								
g. CWM Profile Number																								
h. CWM Profile Number																								
i. CWM Profile Number																								
S. Additional Descriptions for Materials Listed Above a) Tar-Patching b) Batteries c) Corrosion Prevent Compound (overpack in 85 up) d) Paint Enamel e) Dry Clean fluid		T. Handling Codes for Wastes Listed Above a. L d. T g. b. T e. T h. c. L f. i.																						
32. Special Handling Instructions and Additional Information		<table border="1"> <tr> <td>Phast</td> <td>SG</td> <td>Haz</td> </tr> <tr> <td>A 2 100</td> <td>1.5</td> <td>NA</td> </tr> <tr> <td>B L</td> <td>1.0</td> <td>ST</td> </tr> <tr> <td>C L</td> <td>1.0</td> <td>L</td> </tr> <tr> <td>D L</td> <td>1.0</td> <td>L, T</td> </tr> <tr> <td>E L</td> <td>1.2</td> <td>T</td> </tr> </table>					Phast	SG	Haz	A 2 100	1.5	NA	B L	1.0	ST	C L	1.0	L	D L	1.0	L, T	E L	1.2	T
Phast	SG	Haz																						
A 2 100	1.5	NA																						
B L	1.0	ST																						
C L	1.0	L																						
D L	1.0	L, T																						
E L	1.2	T																						
33. Transporter's Acknowledgement of Receipt of Materials		Date																						
Printed/Typed Name Kevin S. Sell		Signature Kevin S. Sell			Month Day Year 11 21 88																			
Transporter's Acknowledgement of Receipt of Materials		Date																						
Printed/Typed Name		Signature			Month Day Year																			
34. Discrepancy Indication Space																								

Chemical Waste Management, Inc.
Emelle Facility
P.O. Box 55
Emelle, Alabama 35459
EPA ID Number: ALD000622464
(205) 652-9721 - Document Control

BAINBRIDGE NTC
C/O DRMO-ABERDEEN
BLDG 3620
ABERDEEN, MD 21005-5001

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator's name: BAINBRIDGE NTC
Generator's US EPA ID: MDP000003770

Enclosed is/are your Generator Number Two copy/copies for
Alabama manifest number(s): CWMA - 409844.

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter also serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approved waste profile submitted for this/these waste(s).

As of July 11, 1988, Chemical Waste Management, Inc, Emelle, Alabama, (ALD000622464), is operating under a RCRA permit issued by US E.P.A., Region IV and also interim status from the Alabama Department of Environmental Management, (ADEM).

If you have any questions regarding manifests, please call (205) 652-9721 and ask for "Document Control". For questions regarding Waste Approval, Profiles, or Lab Samples, ask for "Customer Service". If you are interested in arranging an audit or site tour, please ask for the "Customer Service Representative."

Signature: Wyantia Newton

WYANTHIA NEWTON

Title: Regulatory Document Control Clerk

Date: 01/19/89

Rec'd 1-19-89
7-10-89